## ABSTRACT OF THE DISCLOSURE

A photonic device designed with an intermittent absorption profile along a waveguide. The absorption profile is divided into low-absorption and high-absorption segments that are distributed axially in order to decrease the maximum local temperature in the device. The distribution of low-absorption segments can be controlled through techniques such as proton implantation or selective-area quantum well intermixing. The lengths of low-absorption and high-absorption segments can be adjusted to optimize heat dissipation along the device length.

5

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